

*Sub A<sup>1</sup>* What is claimed is:

- 1.* A method for determining whether a subject has a defect in cell proliferation, comprising assaying a diagnostic sample of the subject for GLUTx expression, wherein detection of GLUTx expression elevated above normal is diagnostic of a defect in cell proliferation.
- 2.* The method of Claim 1, wherein the defect in cell proliferation is a neoplasm or a pre-neoplastic lesion.
- 3.* The method of Claim 2, wherein the neoplasm is an adenocarcinoma.
- 4.* The method of Claim 1, wherein the diagnostic sample is assayed using an agent reactive with GLUTx.
- 5.* The method of Claim 4, wherein the agent is labeled with a detectable marker.
- 6.* The method of Claim 4, wherein the agent is an antibody.
- 7.* The method of Claim 6, wherein the antibody is labeled with a detectable marker.
- 8.* The method of Claim 1, wherein the diagnostic sample is assayed using at least one nucleic acid probe which hybridizes to nucleic acid encoding GLUTx.
- 9.* The method of Claim 8, wherein the nucleic acid probe is DNA or RNA.
- 10.* The method of Claim 9, wherein the nucleic acid probe is labeled with a detectable marker.

*Sub A<sup>2</sup>*

- 11.* A method for assessing the efficacy of therapy to treat a defect in cell proliferation in a subject who has undergone or is undergoing treatment for a defect in cell proliferation, comprising assaying a diagnostic sample of the subject for GLUTx expression, wherein detection of GLUTx expression elevated above normal in the diagnostic sample is indicative of a need to continue therapy to treat the defect in cell proliferation, and normal GLUTx expression in the diagnostic sample is indicative of successful therapy.
- 12.* The method of Claim 11, wherein the defect in cell proliferation is a neoplasm or a pre-neoplastic lesion.

(13) The method of Claim 12, wherein the neoplasm is an adenocarcinoma.

(14) The method of Claim 11, wherein the diagnostic sample is assayed using an agent reactive with GLUTx.

(15) The method of Claim 14, wherein the agent is labeled with a detectable marker.

(16) The method of Claim 14, wherein the agent is an antibody.

(17) The method of Claim 16, wherein the antibody is labeled with a detectable marker.

(18) The method of Claim 11, wherein the diagnostic sample is assayed using at least one nucleic acid probe which hybridizes to nucleic acid encoding GLUTx.

(19) The method of Claim 18, wherein the nucleic acid probe is DNA or RNA.

(20) The method of Claim 19, wherein the nucleic acid probe is labeled with a detectable marker.

(21) ~~A method for assessing the prognosis of a subject who has a defect in cell proliferation, comprising assaying a diagnostic sample of the subject for GLUTx expression, wherein the subject's prognosis improves with a decrease in GLUTx expression in the diagnostic sample, the subject's prognosis worsens with an increase in GLUTx expression in the diagnostic sample, the subject's prognosis is favorable at normal levels of GLUTx expression in the diagnostic sample, and the subject's prognosis is unfavorable at high levels of GLUTx expression in the diagnostic sample.~~

(22) The method of Claim 21, wherein the defect in cell proliferation is a neoplasm or a pre-neoplastic lesion.

(23) The method of Claim 22, wherein the neoplasm is an adenocarcinoma.

24. A method for treating a defect in cell proliferation in a subject in need of treatment thereof, comprising inhibiting GLUTx.

25. The method of Claim 1, wherein the defect in cell proliferation is a neoplasm or a pre-neoplastic lesion.

26. The method of Claim 25, wherein the neoplasm is an adenocarcinoma.

27. The method of Claim 24, wherein GLUTx is inhibited by administering to the subject an amount of a GLUTx inhibitor effective to treat the defect in cell proliferation in the subject.

28. The method of Claim 27, wherein the GLUTx inhibitor is an agent reactive with GLUTx.

29. The method of Claim 28, wherein the agent is an oligonucleotide antisense to GLUTx.

30. A method for treating ischemia in a subject in need of treatment thereof, comprising administering to the subject an amount of GLUTx effective to treat the ischemia in the subject.

31. The method of Claim 30, wherein GLUTx is administered by introducing GLUTx protein into cells of the subject.

32. The method of Claim 30, wherein GLUTx is administered by introducing into cells of the subject a nucleic acid encoding GLUTx, in a manner permitting expression of GLUTx.

33. The method of Claim 32, wherein the nucleic acid is introduced by a method selected from the group consisting of electroporation, DEAE Dextran transfection, calcium phosphate transfection, cationic liposome fusion, protoplast fusion, creation of an *in vivo* electrical field, DNA-coated microprojectile bombardment, injection with recombinant replication-defective viruses, homologous recombination, *in vivo* gene therapy, *ex vivo* gene therapy, viral vectors, and naked DNA transfer.

34. The method of Claim 30, wherein the ischemia is ischemic heart disease or stroke.

35. A method for treating ischemia in a subject in need of treatment thereof, comprising administering to the subject an amount of a GLUTx modulator effective to treat the ischemia in the subject.